

TP 00489

TP-00489

NOAA FORM 76-35 (6-80)	
U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL OCEAN SURVEY	
DESCRIPTIVE REPORT	
Map No. TP-00489	Edition No. 1
Job No. CM-7713	
Map Classification FINAL, FIELD EDITED MAP	
Type of Survey SHORELINE	
LOCALITY	
State HAWAII	
General Locality HAWAII SOUTHEAST COAST	
Locality HONUAPPO BAY	
19 77 TO 19 79	
REGISTERED IN ARCHIVES	
DATE	

NOAA FORM 76-36A (3-72)		U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMIN.	
<b>DESCRIPTIVE REPORT - DATA RECORD</b>		TYPE OF SURVEY <input checked="" type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED	
PHOTOGRAMMETRIC OFFICE  Coastal Mapping Division, Norfolk, VA		SURVEY TP. <u>00489</u>  MAP EDITION NO. <u>(1)</u>  MAP CLASS <u>Final</u>  JOB <u>CM-7713</u>	
OFFICER-IN-CHARGE  Roy K. Matsushige		LAST PRECEDING MAP EDITION TYPE OF SURVEY <input type="checkbox"/> ORIGINAL <input type="checkbox"/> RESURVEY <input type="checkbox"/> REVISED	
JOB PH. _____ MAP CLASS _____ SURVEY DATES: 19__ TO 19__			
<b>I. INSTRUCTIONS DATED</b>			
<b>1. OFFICE</b>		<b>2. FIELD</b>	
Aerotriangulation Feb. 13, 1978  Compilation Jun. 23, 1978		Control Nov. 2, 1977	
<b>II. DATUMS</b>			
1. HORIZONTAL: <input type="checkbox"/> 1927 NORTH AMERICAN		OTHER (Specify) Old Hawaiian Datum	
2. VERTICAL: <input checked="" type="checkbox"/> MEAN HIGH-WATER <input type="checkbox"/> MEAN LOW-WATER <input type="checkbox"/> MEAN LOWER LOW-WATER <input type="checkbox"/> MEAN SEA LEVEL		OTHER (Specify)	
3. MAP PROJECTION  Transverse Mercator		4. GRID(S) STATE Hawaii ZONE 1	
5. SCALE 1:5,000		STATE ZONE	
<b>III. HISTORY OF OFFICE OPERATIONS</b>			
<b>OPERATIONS</b>		<b>NAME</b>	
<b>DATE</b>			
1. AEROTRIANGULATION BY METHOD: Analytic LANDMARKS AND AIDS BY		R. Fisher May 1978	
2. CONTROL AND BRIDGE POINTS PLOTTED BY METHOD: Coradomat 21 CHECKED BY		S. Solbeck May 1978 S. Solbeck May 1978	
3. STEREOSCOPIC INSTRUMENT PLANIMETRY BY COMPILATION CHECKED BY INSTRUMENT: Wild B-8 SCALE: 1:5,000 CONTOURS BY CHECKED BY		R. Kravitz Oct 1978 A. Rauck Oct 1978 N.A. N.A.	
4. MANUSCRIPT DELINEATION PLANIMETRY BY CHECKED BY CONTOURS BY CHECKED BY METHOD: Smooth drafted SCALE: 1:5,000 HYDRO SUPPORT DATA BY CHECKED BY		R. Kravitz Dec 1978 F. Margiotta Jan 1979 N.A. N.A. R. Kravitz Dec 1978 F. Margiotta Jan 1979	
5. OFFICE INSPECTION PRIOR TO FIELD EDIT BY		F. Margiotta Jan 1979	
6. APPLICATION OF FIELD EDIT DATA BY		F. Mauldin Jun 1980	
7. COMPILATION SECTION REVIEW BY		R. Kravitz Jun 1980	
8. FINAL REVIEW BY		J. Hancock Feb 1986	
9. DATA FORWARDED TO PHOTOGRAMMETRIC BRANCH BY		J. Hancock Feb 1986	
10. DATA EXAMINED IN PHOTOGRAMMETRIC BRANCH BY		P. Dempsey May 1986	
11. MAP REGISTERED - COASTAL SURVEY SECTION BY		E. DAUGHERTY MAY 86	

NOAA FORM 76-36B  
(3-72)U. S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SURVEY

TP-00489

## COMPILATION SOURCES

## 1. COMPILATION PHOTOGRAPHY

CAMERA(S) F. L. = 153.21 mm Zeiss RMK A 15/23, Lens 118960		TYPES OF PHOTOGRAPHY LEGEND (C) COLOR (P) PANCHROMATIC (I) INFRARED		TIME REFERENCE	
TIDE STAGE REFERENCE <input checked="" type="checkbox"/> PREDICTED TIDES <input type="checkbox"/> REFERENCE STATION RECORDS <input type="checkbox"/> TIDE CONTROLLED PHOTOGRAPHY				ZONE Hawaii MERIDIAN 150th	<input checked="" type="checkbox"/> STANDARD <input type="checkbox"/> DAYLIGHT
NUMBER AND TYPE	DATE	TIME	SCALE	STAGE OF TIDE	
77GSAASY 642 thru 644	Mar.26,1977	14:50	1:15,000	0.4 ft. above MLLW  Mean range = 1.7 ft.	

## REMARKS

Photography by American Aerial Survey, Inc., of Northern California Geodetic Survey

## 2. SOURCE OF MEAN HIGH-WATER LINE:

The mean high water line was compiled by instrument methods using the 1:15,000 scale photographs and graphically using ratio prints to assist in the compilation process.

## 3. SOURCE OF MEAN LOW-WATER OR MEAN LOWER LOW-WATER LINE:

None.

## 4. CONTEMPORARY HYDROGRAPHIC SURVEYS (List only those surveys that are sources for photogrammetric survey information.)

SURVEY NUMBER	DATE(S)	SURVEY COPY USED	SURVEY NUMBER	DATE(S)	SURVEY COPY USED
H-9857	Oct.-Dec.79	Registered			

## 5. FINAL JUNCTIONS

NORTH	EAST	SOUTH	WEST
TP-00380	TP-00380	TP-00380	TP-00380

## REMARKS

This map lies within TP-00380 (scale 1:20,000)

# HISTORY OF FIELD OPERATIONS

I. ☒ FIELD INSPECTION OPERATION (Photoidentification) ☐ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	R. Melby	Jan. 1978
2. HORIZONTAL CONTROL	RECOVERED BY ESTABLISHED BY PRE-MARKED OR IDENTIFIED BY	None None None
3. VERTICAL CONTROL	RECOVERED BY ESTABLISHED BY PRE-MARKED OR IDENTIFIED BY	None None None
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY LOCATED (Field Methods) BY IDENTIFIED BY	None None None
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE <input type="checkbox"/> SPECIFIC NAMES ONLY <input checked="" type="checkbox"/> NO INVESTIGATION	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY	None
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY	N.A.

## II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED		2. VERTICAL CONTROL IDENTIFIED	
None		None	
PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION

### 3. PHOTO NUMBERS (Clarification of details)

None

### 4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED

None

PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME

5. GEOGRAPHIC NAMES: ☐ REPORT ☒ NONE

6. BOUNDARY AND LIMITS: ☐ REPORT ☒ NONE

### 7. SUPPLEMENTAL MAPS AND PLANS

None

### 8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division)

1 field report

NOAA FORM 76-36C  
(3-72)U. S. DEPARTMENT OF COMMERCE  
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION  
NATIONAL OCEAN SURVEY

TP-00489

## HISTORY OF FIELD OPERATIONS

I. ☐ FIELD INSPECTION OPERATION☒ FIELD EDIT OPERATION

OPERATION	NAME	DATE
1. CHIEF OF FIELD PARTY	W. Mobley	Dec. 1979
2. HORIZONTAL CONTROL	RECOVERED BY J. Talbott	Dec. 1979
	ESTABLISHED BY None	
	PRE-MARKED OR IDENTIFIED BY None	
3. VERTICAL CONTROL	RECOVERED BY None	
	ESTABLISHED BY None	
	PRE-MARKED OR IDENTIFIED BY None	
4. LANDMARKS AND AIDS TO NAVIGATION	RECOVERED (Triangulation Stations) BY None	
	LOCATED (Field Methods) BY None	
	IDENTIFIED BY W. Mobley	Dec. 1979
5. GEOGRAPHIC NAMES INVESTIGATION	TYPE OF INVESTIGATION <input type="checkbox"/> COMPLETE <input type="checkbox"/> SPECIFIC NAMES ONLY <input checked="" type="checkbox"/> NO INVESTIGATION	
6. PHOTO INSPECTION	CLARIFICATION OF DETAILS BY T. Clark	Dec. 1979
7. BOUNDARIES AND LIMITS	SURVEYED OR IDENTIFIED BY N.A.	

## II. SOURCE DATA

1. HORIZONTAL CONTROL IDENTIFIED None		2. VERTICAL CONTROL IDENTIFIED N.A.	
PHOTO NUMBER	STATION NAME	PHOTO NUMBER	STATION DESIGNATION
3. PHOTO NUMBERS (Clarification of details) Cronapaque Ratios 77GSAASY 642-644 (1:5,000 scale) 76GSAASY 47-48 (1:20,000 scale)			
4. LANDMARKS AND AIDS TO NAVIGATION IDENTIFIED None			
PHOTO NUMBER	OBJECT NAME	PHOTO NUMBER	OBJECT NAME
5. GEOGRAPHIC NAMES: <input type="checkbox"/> REPORT <input checked="" type="checkbox"/> NONE		6. BOUNDARY AND LIMITS: <input type="checkbox"/> REPORT <input checked="" type="checkbox"/> NONE	
7. SUPPLEMENTAL MAPS AND PLANS None			
8. OTHER FIELD RECORDS (Sketch books, etc. DO NOT list data submitted to the Geodesy Division) 1-field edit film print 1-field edit report 1-field edit paper print 1-field 76-40 form			

## RECORD OF SURVEY USE

## I. MANUSCRIPT COPIES

COMPILATION STAGES			DATE MANUSCRIPT FORWARDED	
DATA COMPILED	DATE	REMARKS	MARINE CHARTS	HYDRO SUPPORT
Compilation complete pending field edit.	Jan. 1979	Class III Manuscript	Mar. 1979	Mar. 1979
Field edit applied Compilation complete pending final review.	Jun. 1980	Class I Manuscript	Jul. 1980	Jul. 1980 & Feb. 1982
Final Review	Feb. 1986	Final Map	Mar 1986	Mar 1986

## II. LANDMARKS AND AIDS TO NAVIGATION

## 1. REPORTS TO MARINE CHART DIVISION, NAUTICAL DATA BRANCH

(NUMBER pages)	CHART LETTER NUMBER ASSIGNED	DATE FORWARDED	REMARKS
1		Mar 1986	Landmark to be Charted

2. ☐ REPORT TO MARINE CHART DIVISION, COAST PILOT BRANCH. DATE FORWARDED: \_\_\_\_\_3. ☐ REPORT TO AERONAUTICAL CHART DIVISION, AERONAUTICAL DATA SECTION. DATE FORWARDED: \_\_\_\_\_

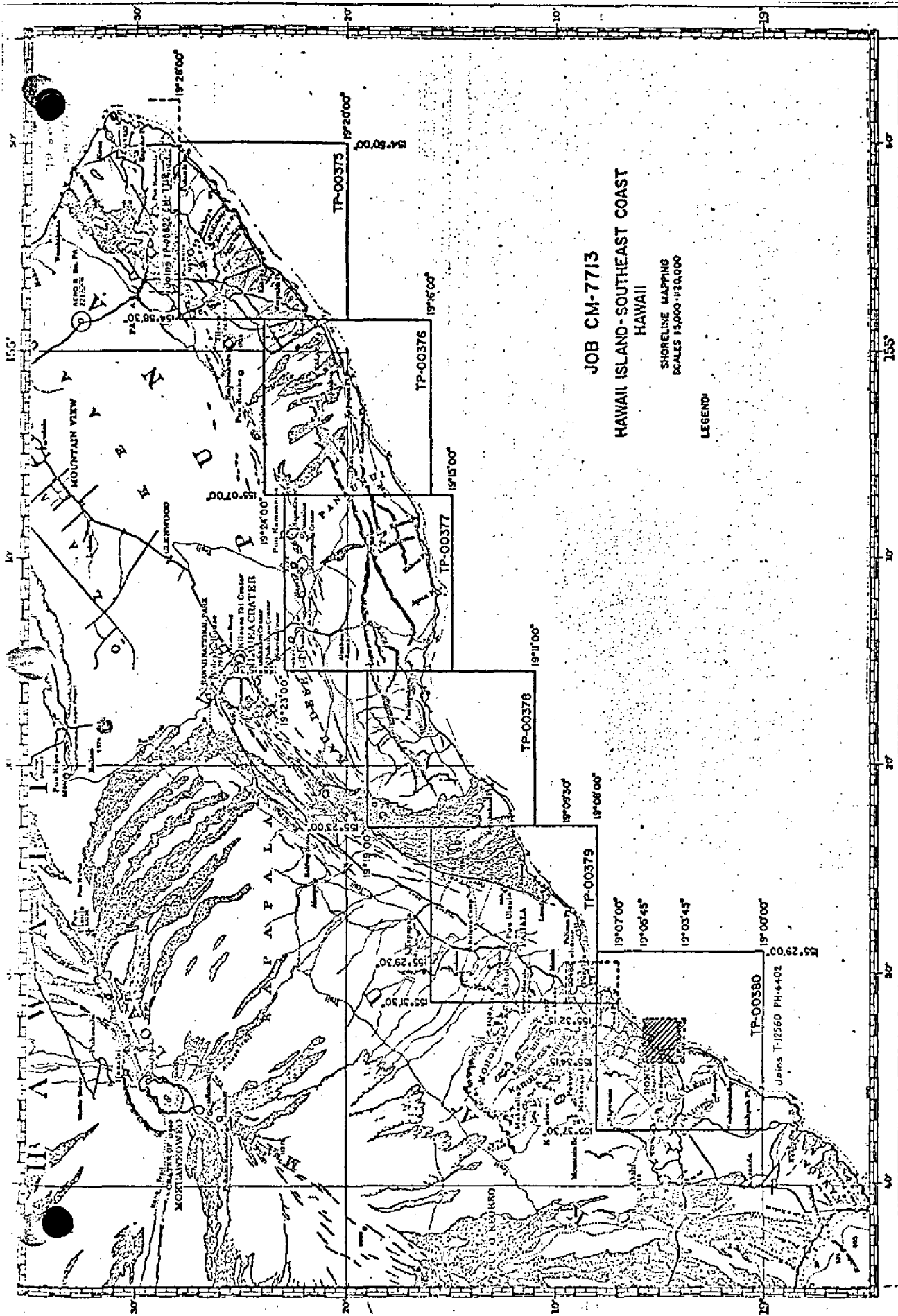
## III. FEDERAL RECORDS CENTER DATA

1. ☒ BRIDGING PHOTOGRAPHS; ☒ DUPLICATE BRIDGING REPORT; ☒ COMPUTER READOUTS.  
2. ☒ CONTROL STATION IDENTIFICATION CARDS; ☒ FORM NOS 76-40 ~~76-40~~ SUBMITTED BY FIELD PARTIES.  
3. ☒ SOURCE DATA (except for Geographic Names Report) AS LISTED IN SECTION II, NOAA FORM 76-36C.  
ACCOUNT FOR EXCEPTIONS:

4. ☐ DATA TO FEDERAL RECORDS CENTER. DATE FORWARDED: \_\_\_\_\_

## IV. SURVEY EDITIONS (This section shall be completed each time a new map edition is registered)

SECOND EDITION	SURVEY NUMBER TP - _____ (2)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY  MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
THIRD EDITION	SURVEY NUMBER TP - _____ (3)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY  MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	
FOURTH EDITION	SURVEY NUMBER TP - _____ (4)	JOB NUMBER PH - _____	TYPE OF SURVEY <input type="checkbox"/> REVISED <input type="checkbox"/> RESURVEY  MAP CLASS <input type="checkbox"/> II. <input type="checkbox"/> III. <input type="checkbox"/> IV. <input type="checkbox"/> V. <input type="checkbox"/> FINAL
	DATE OF PHOTOGRAPHY	DATE OF FIELD EDIT	



SUMMARY TO ACCOMPANY  
DESCRIPTIVE REPORT

TP-00489

This 1:5,000 scale final shoreline map is one of eight maps that comprise project CM-7713, Hawaii Island, Southeast Coast, Hawaii. The eight maps are assigned as TP-00375 through TP-00380 at 1:20,000 scale and TP-00488 and TP-00489 at 1:5,000 scale.

The purpose of this map was to furnish data in support of hydrographic operations and to provide current shoreline data for marine charts.

This map portrays shoreline along the southeastern coast of Hawaii Island from Lat. 19°03'45" to Lat. 19°05'45" and is an inset map which lies within map TP-00380. This large scale map features Honuapo Bay which is one of the few harbor/landing areas along the southeastern coastline.

Photo coverage for the project was adequately provided with panchromatic photography flown by a private contractor, American Aerial Survey, Inc., with the Zeiss RMKA 15/23 camera. Aerotriangulation/ compilation photographs at 1:50,000 and 1:30,000 scales and supplemental compilation/photo-hydro support photographs at 1:30,000 and 1:15,000 scales were taken at various times from December 1976 to March 1977.

Field work prior to compilation consisted of the recovery, establishment, and photoidentification of horizontal control necessary for aerotriangulation. This activity was completed February 1978.

Analytic aerotriangulation was provided by the Washington Science Center in May 1978. This activity included ruling the base manuscripts and providing ratio photographs for compilation. In addition to this project, control was established in order to complete the compilation of three maps for adjoining project PH-6402. During the compilation process of CM-7713, modifications to the original control were made by the aerotriangulation section and subsequent control accompanied with an Addendum to the Photo Plot Report were provided in November 1978.

Compilation by office interpretation of the 1:15,000 scale mapping photographs was performed at the Coastal Mapping Section, Atlantic Marine Center in January 1979. Copies of the Class III manuscript and hydrographic support data were forwarded to the hydrographer for field edit. A copy of the Class III manuscript was also submitted to the Marine Charts Section.

Field edit for this map was performed by NOAA Ship RAINIER personnel in conjunction with hydrographic survey H-9857, field surveyed in Oct.-Dec. 1979.



TP-00489

Application of field edit data was accomplished at the Photogrammetric Section, Atlantic Marine Center in June 1980. Field edit involved the photoidentification of many alongshore rocks. In various cases, the field editor made an attempt to photoidentify rocks within the heavy coastal surf that is apparent on both the 1:5,000 and 1:20,000 scale ratio photographs. The method of locating the rocks and the accuracy of transferring photoidentified rocks from a 1:20,000 scale ratio to the 1:5,000 scale map was questioned during application. Consequently, the position approximate (PA) notation was utilized throughout the manuscript. The manuscript was advanced to Class I and copies were forwarded to the Hydrographic Surveys Branch and the Nautical Charting Section.

Final review was performed at the Atlantic Marine Center in February 1986. No attempt was made to remove the previously mentioned (PA) rocks since the hydrographer and chart compiler have applied the information as noted. A final Chart Maintenance Print and Notes to Hydrographer Print were prepared to identify all revisions and were forwarded to Photogrammetry Headquarters for distribution.

The Descriptive Report for this final field edited map contains all pertinent information used to produce this map. The original base manuscript and related data were forwarded to the Washington Science Center for final registration.

## FIELD INSPECTION

TP-00489

There was no field inspection prior to compilation. Field work accomplished was limited to the recovery and photoidentification of the horizontal control necessary for the aerotriangulation of the project.

## FIELD OPERATIONS REPORT

### Projects CM-7712 & CM-7713

North and Southeast Coast, Island of Hawaii, Hawaii

January - February 1978

#### Area:

The two adjoining projects covers the southeast and northeast coast of the Island of Hawaii. The southernmost portion of the area is virtually a desert with little rainfall. The northeast coast is subjected to considerable rainfall and sugar cane fields are commonplace.

Except for a couple of small, isolated beaches, the shoreline is steep and rocky, where the lava flows reached the ocean.

#### Photography:

Panchromatic aerial photography was furnished the field unit for the photo-identification of the required horizontal control stations, necessary for the aerotriangulation. The photography was considered adequate for the field identification.

#### Horizontal Control:

All of the stations were reached by vehicle or short distance back packing

Several sun azimuths were observed to determine the azimuth to substitute stations. Greenwich Mean Time was observed and recorded with short wave radio signals from WNVH and a digital watch. Time and observed zenith distances were recorded to permit either the time/azimuth or time/altitude method of computation.

Station HILINA USGS 1961 was photo-identified and a sun azimuth was observed. B.M. 139YY USGS was used as an intermediate azimuth point, in conjunction with the sun azimuth. The B.M. did not have a previous azimuth or position. The U.S.G.S. published data lists R.M.I. as  $46^{\circ}00'26''$ . A telephone conversation with the U.S.G.S. in Menlo Park, California confirmed the number 4 and 6 were transposed and the azimuth should read  $64^{\circ}00'26''$ . The reference mark was used as a check angle.

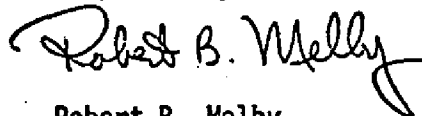
Station PUU ULAULA was photo-identified using a sun azimuth and a stack. the stack is station PAHALA, KAU SUGAR CO STACK, 1977. An N.G.S. Geodetic Field Party was working in the area and a position of the stack should be available from Geodesy in the near future. However, the sun azimuth can be used to determine the azimuth to the sub-points.

Page 2

The field-photo data was submitted to the Rockville office before this report was written to permit the aerotriangulation of the flightlines at the earliest date.

Two non-floating aids to navigation and one landmark for charts were located by triangulation/traverse methods. They have been entered and submitted on form 76-40 to C-3415.

Respectfully Submitted,

A handwritten signature in dark ink, appearing to read "Robert B. Melby". The signature is fluid and cursive, with a long, sweeping underline that extends to the right.

Robert B. Melby  
Chief, PMC Photo Party  
CPM 133

PHOTOGRAMMETRIC PLOT REPORT  
HAWAII ISLAND-SOUTHEAST COAST  
CM-7713

May 10, 1978

Area Covered

This project covers most of the southeast coast of Hawaii Island, Hawaii. The following T-sheets are involved:

TP-00375 thru TP-00380 (1:20,000)  
TP-00488 and TP-00489 (1:5,000 )

In addition to the above T-sheets, T-12559 thru T-12561 at 1:10,000 scale from PH-6402 are also covered.

Method

Two strips of 1:50,000 (strips 1 and 2) and one strip of 1:30,000 (strip 4) panchromatic photography were bridged by analytic aerotriangulation methods.

Strip 4 was bridged solely to provide compilation points for 1:15,000 compilation photography covering TP-00488 and TP-00489.

Ties were made with strip 2 of CM-7712 on the north coast and strip 12 of PH-6402 located near the southern end of the island.

Ratio points for the offshore 1:30,000 scale strips 11 thru 18 were read on the 1:50,000 strips.

Strip 12, 1:30,000, of PH-6402 which would not adjust satisfactorily in 1969 for unknown reasons was rebridged using old horizontal control along with 1977 identified horizontal control and ties from the 1:50,000 strip 2 of the CM-7713 project.

Strips 2 and 4 of CM-7713 and strip 12 of PH-6402 adjusted satisfactorily. The 1964 subpoint for KAMILO (HTS) 1898 is believed to be in error and was disregarded.

Strip 1 of CM-7713 could not be adjusted to meet bridging accuracy standards for all stations. A problem is suspected with PULAMA 1914 but could not be resolved. The final adjustment to this strip was made letting PULAMA 1914 float and disregarding the error in y of about -25 feet at this station.

Ratio points for an offshore 1:15,000 color strip were read on Strip 12. (PH-6402)

T-sheets TP-00375 through TP-00380, TP-00488, TP-00489, and T-12559 through T-12561 were plotted and sent to AMC at Norfolk, Virginia.

Adequacy of Control

With the exception of a horizontal control problem in strip 1 the horizontal control was adequate.

Vertical control was obtained from shoreline points and USGS quadrangle elevations and was satisfactory.

Photography

The quality and location of the photography was satisfactory.

This photography was flown by American Aerial Survey, Inc., with a Zeiss RMK A 15/23 camera, lens serial number 118960.

Submitted by:

*Robert E. Fisher*

Robert E. Fisher

Approved and Forwarded:

*Don O. Norman*

Don O. Norman  
Acting Chief  
Aerotriangulation Section

## HORIZONTAL CONTROL FOR CM-7713

- 1 KALAE LIGHT 1948
- 1A KALAE 2, 1948
- 1B KALAE 1887
- 2 PALAHEMO 1898
- 3 MAHANA 1898
- 4 KAMILO (HTS) 1898
- 5 STEIN 2 (HTS) 1949 ✓
- 6 LUU 1930 /
- 7 PUU ULAULA 1914 ✓
- 8 HILINA USGS 1961 ✓
- 9 PULAMA 1914 /
- 10 KALIU 1949 /
- 11 CAPE KUMUKAHI LIGHTHOUSE 1949

## HORIZONTAL FIT TO CONTROL (FEET)

STRIP #1 (1:50,000)

6. LUU 1930	(1.90, 0.26)
SUB PT.	(1.45, -1.00)
7. PUU ULAULA 1914	(-3.55, -0.98)
8. HILINA USGS 1961	
SUB PT. A	(5.34, -1.60)
SUB PT. B	(1.67, 1.16)
9. PULAMA 1914	
SUB PT. A	(4.59, -23.68)
SUB PT. B	(11.88, -28.72)
10. KALIU 1949	(-2.05, -8.61)
SUB PT.	(0.03, -2.17)

STRIP #2 (1:50,000)

1A KALAE 2, 1948	
SUB PT. A	(-0.96, 0.23)
SUB PT. B	(1.19, 0.95)
4. KAMILO (HTS) 1898	(2.06, 0.58)
SUB PT.	(0.33, -0.11)
5. STEIN 2 (HTS) 1949	(-1.26, -1.59)
SUB PT.	(2.42, 1.99)
6. LUU 1930	(-0.07, 1.16)
SUB PT.	(-0.24, -0.47)
7. PUU ULAULA 1914	(0.23, -0.36)

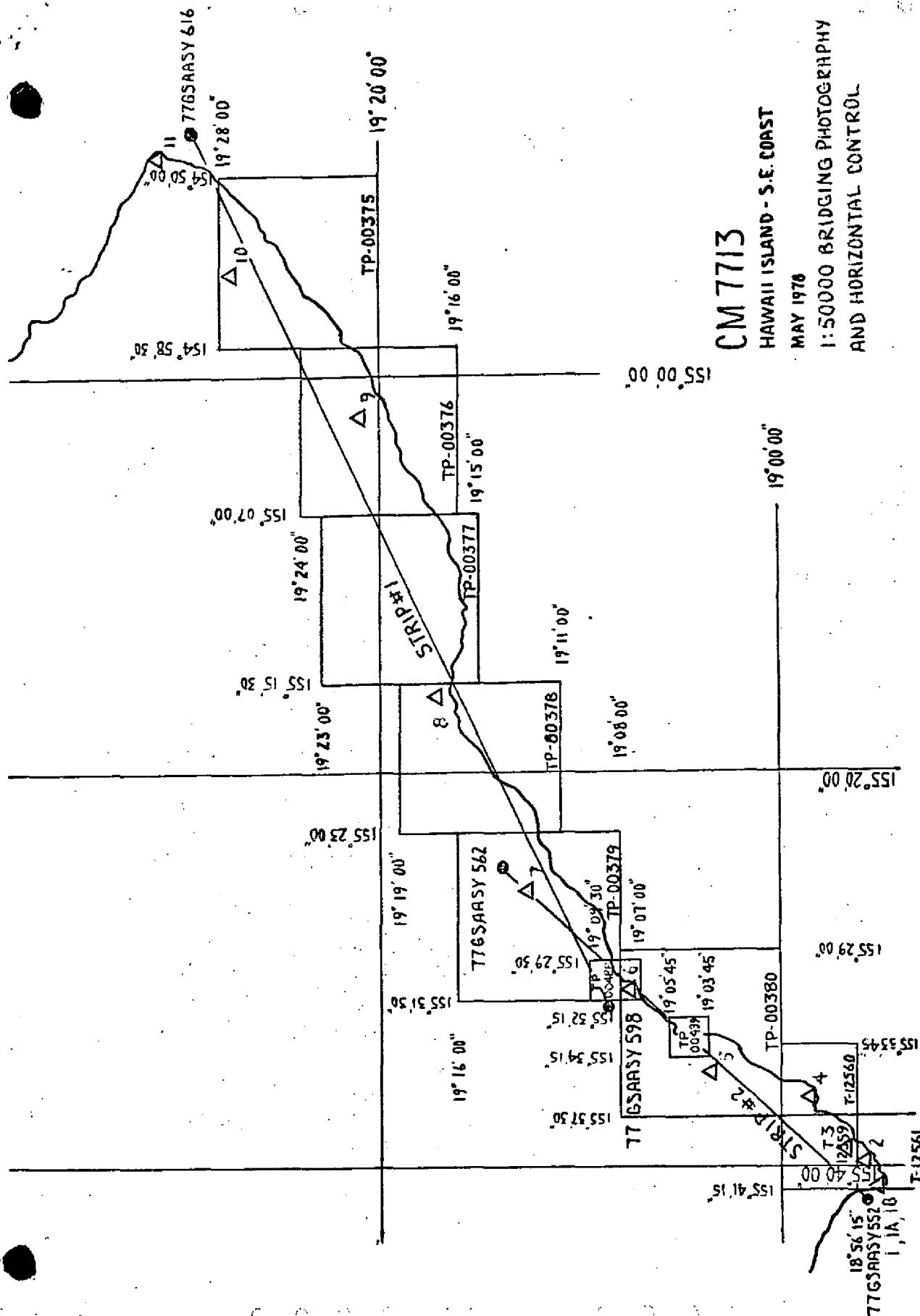
STRIP #4 (1:30,000)

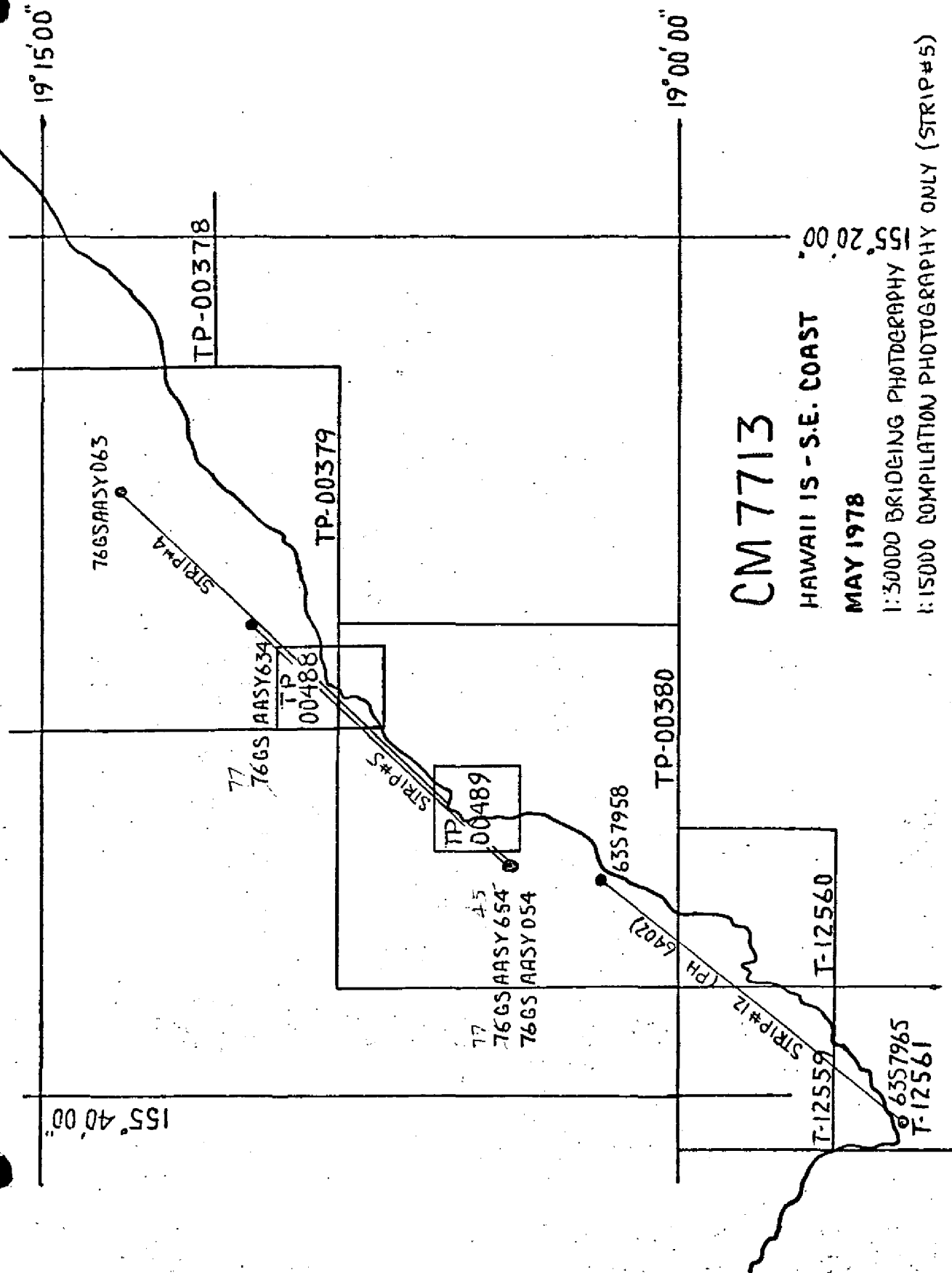
5. STEIN 2 (HTS) 1949	(-0.01, -0.04)
SUB PT.	(0.11, 4.03)
6. LUU 1930	(0.00, 0.00)
7. PUU ULAULA 1914	(0.01, 0.01)



STRIP #12 (1:30,000)

4. KAMILO (HTS) 1898	(4.01, -0.39)
3. MAHANA 1898	(1.48, 0.46)
2. PALAHEMO 1898	(2.64, -1.31)
1B. KALAE 1887	(0.36, -0.37)
1A. KALAE 2, 1948 SUB PT.	(2.30, 1.46)
1. KALAE LIGHT 1948	(-0.16, -0.27)





CM 7713

HAWAII IS - S.E. COAST

MAY 1978

1:30000 BRIDGING PHOTOGRAPHY

1:15000 COMPILATION PHOTOGRAPHY ONLY (STRIP#5)

CM 7713

HAWAII ISLAND - S.E. COAST

MAY 1978

1:30000 RATIO PHOTOGRAPHY

Addendum  
Photogrammetric Plot Report  
Hawaii ~~Island~~ - SE Coast  
CM-7713  
November 28, 1978

The intersection station, Honuapo, Hutchinson Sugar Co., Mill Stack, 1967 would not fit the control points used for strip adjustment. This stack lies between Stein 2 (HTS), 1949 and LUU, 1930. Both Stein 2 and LUU are identified direct.

In Strip 4 (1:30,000 scale) the stack is a poor image. When the three control points for the strip are held, the stack is out about 10 feet in X and 16 feet in Y. However, the quality of a strip adjustment with only three control points can not always be evaluated.

In Strip 2 (1:50,000 scale) the image of the stack is also questionable, but its approximate position can be measured. In this strip, there are five field identified control points to adjust the strip and the adjustment with these five points is good. The stack is out 3 x 12 feet in this strip. (I believe the discrepancy between the two strips is due chiefly to the image quality of the stack).

The written description of the stack appears to agree with the image on the 1:15,000 scale photography. The image is good on this photography. The stack was cut in from three stations by Geodesy. No other information appears to be available.

On the basis of the adjustment of Strip 2 with the five control stations, I can only surmise that the discrepancy is with the position on the stack and that the strips covering this area and the control used to adjust these strips are adequate.

*Don D. Norma*

## DESCRIPTIVE REPORT CONTROL RECORD

MAP NO. TP-00489	JOB NO. CM-7713	GEODETTIC DATUM Old Hawaiian		GEOGRAPHIC POSITION		ORIGINATING ACTIVITY Coastal Mapping Div., AMC	
		COORDINATES IN FEET STATE <u>Hawaii</u> ZONE <u>1</u>	AEROTRI- ANGULATION POINT NUMBER	$\phi$ LATITUDE $\lambda$ LONGITUDE	REMARKS		
NONE				X=	$\phi$		
				Y=	$\lambda$		
				X=	$\phi$		
				Y=	$\lambda$		
				X=	$\phi$		
				Y=	$\lambda$		
				X=	$\phi$		
				Y=	$\lambda$		
				X=	$\phi$		
				Y=	$\lambda$		
				X=	$\phi$		
				Y=	$\lambda$		
				X=	$\phi$		
				Y=	$\lambda$		
				X=	$\phi$		
				Y=	$\lambda$		
COMPUTED BY A. Rauck				COMPUTATION CHECKED BY R. Kravitz		DATE Oct 3, 1978	DATE Dec. 11, 1978
LISTED BY A. Rauck				LISTING CHECKED BY R. Kravitz		DATE Oct 3, 1978	DATE Dec. 11, 1978
HAND PLOTTING BY				HAND PLOTTING CHECKED BY		DATE	DATE

## COMPILATION REPORT

CM-7713

TP-00489

31 - DELINEATION

Delineation was by instrument methods using the Wild B-8 stereoplotter and 1:15,000 scale compilation photographs. Ratio photographs were provided in order to assist in graphic compilation of the mean high water line. Photo coverage and quality were adequate.

32 - CONTROL

See the Photogrammetric Plot Report dated May 10, 1978.

33 - SUPPLEMENTAL DATA

None.

34 - CONTOURS AND DRAINAGE

Contours are not applicable to the project. Drainage was by the Wild B-8 stereoplotter and by office stereoscopic interpretation of the ratioed photographs.

35 - SHORELINE AND ALONGSHORE DETAIL

Alongshore details were delineated by the Wild B-8 stereoplotter and by office inspection of the ratioed photographs.

The mean high water line was office edited and refined from the ratioed photographs. Heavy surf action, apparent on the photographs, made delineation extremely difficult.

36 - OFFSHORE DETAILS

The delineation of both alongshore and offshore detail which primarily consists of rocks, was hindered by the apparent shoreline breakers that originate an average of 100 feet offshore.

37 - LANDMARKS AND AIDS

Within the limits of this manuscript, there were two charted landmarks. They were located photogrammetrically. There were no aids charted.

38 - CONTROL FOR FUTURE SURVEYS

None.

39 - JUNCTIONS

See the Form 76-36B, item 5 of the Descriptive Report concerning junctions.

40 - HORIZONTAL AND VERTICAL ACCURACY

Refer to the Photogrammetric Plot Report dated May 10, 1978.

46 - COMPARISON WITH EXISTING MAPS

A comparison was made with the following U.S. Geological Survey Quadrangle:  
Naalehu, HA, scale 1:24,000, 1962.

47 - COMPARISON WITH NAUTICAL CHARTS

A comparison was made with National Ocean Survey Charts 19320, scale 1:250,000, 12th edition, dated June 17, 1978 and 19322, scale 1:2,500, 5th edition, dated June 25, 1977.

ITEMS TO BE APPLIED TO NAUTICAL CHARTS IMMEDIATELY

None.

ITEMS TO BE CARRIED FORWARD

None.

Submitted by:

*Robert R. Kravitz*  
Robert R. Kravitz  
Cartographic Technician  
December 12, 1978

Approved:

*Albert C. Rauck, Jr.*

Albert C. Rauck, Jr.  
Chief, Coastal Mapping Section



ADDENDUM TO THE COMPILATION REPORT

TP-00489

FIELD EDIT

The Field Edit was adequate. There was one minor problem in that the field editor used 1:20,000 scale photos to locate some of the rocks. This made location of these rocks on this sheet very difficult since this is a 1:5,000 sheet. The field editor should have used the 1:5,000 ratios provided to locate all rocks.

The term "foul with rocks and submerged ledge" was changed to "breakers" in order to conform with the majority of this project, which was edited during the 1980 field season. TP-00380 (1:20,000) and TP-00489 (1:5000) were the only sheets completed in 1979.

TP-00489  
ADDENDUM TO THE COMPILATION REPORT  
&  
NOTES TO THE REVIEWER

1. Some rocks generalized on the Discrepancy Sheet were not found on the photos indicated. This includes rocks in the area of latitude 19°05'15", longitude 155°32'50"; and latitude 19°05'17", longitude 155°33'05". No rocks were shown on photo 77GSAASY 642 in these areas, contrary to the information on the Discrepancy Sheet.
2. A note on the Discrepancy Sheet indicates a rock on photo 76GSAASY47 which is a 1:20,000 scale photo. Due to the heavy surf, the rock cannot be seen on 1:5,000 scale photos. Photos 77GSAASY642-643 were viewed in stereo and the position of the rock was picked approximately on photo 642. This rock was then transferred to the sheet with "PA" beside it. This rock falls about latitude 19°05'05", longitude 155°33'17".
3. A rock shown on the Discrepancy Sheet as "PA", said by the field editor to be about 50 ft. offshore, straight out from the point, was scaled on the sheet and labeled "PA". This rock falls about latitude 19°05'13", longitude 155°33'15". No mention of this rock is made on any photo.
4. Five rocks were located by the field editor on photo (scale 1:20,000) 76GSAASY48. The area was viewed stereoscopically using photos 77GSAASY 643-644 (scale 1:5,000). Due to heavy surf, the rocks could not be seen, and thus were placed approximately on photo 644. These rocks were then transferred to the sheet with "PA" beside them. These rocks fall about latitude 19°03'53" to latitude 19°04'05", and longitude 155°33'20".
5. There are two (2) positions shown for a landmark stack at the Hutchinson Sugar Co. in Honuapo, HA. There was no stack at the position shown for the triangulation station on form 76-41. The stack was located photogrammetrically and scaled off the sheet. This position was shown on the 76-40. According to the field editor, the stack is destroyed and the building is being torn down.
6. On the matte photograph 77GSAASY642, the field editor made some pencil notes about marsh and the ruins of a water channel. These were not transferred in ink to the cronapaque photo. We showed the water channel as a "stream" which was changed to "ditch" as per ACR June 16, 1980. All other pencil notes were ignored as per ACR June 18, 1980. Only ink notes were applied to the sheet.

June 22, 1978

14

Geographic Names

Final Name Sheet

CM-7713 (Island of Hawaii-Southeast Coast)

TP-00489

Halekini

Hale o Kane

~~Hanakaulea~~ Hanakaulua *gth*

Honuapo

Honuapo Bay

Kahukupoko

Kawelohea

Keawanui

Lae Pohue

Pacific Ocean

Paewa

Pali Pohina


~~Pohakuolea~~ Pohakuohau *gth*

Puhioi

Puu o Kaau

Waipouli

Approved by:

  
Charles E. Harrington  
Chief Geographer- C3X8

FIELD EDIT REPORT  
OPR-T126-RA-79  
CM-7713  
TP 00489

HAWAII  
Hawaii, Southeast Coast  
(Honuapo Bay)

1 Field Edit

20 November 1979 - 3 December 1979  
(J.D. 324 - J.D. 337)

### Methods

Field edit operations on TP 00489 began 20 November 1979 (J.D. 324) and ended 3 December 1979 (J.D. 337). Ship's time (GMT-9) was used to reference shoreline features in the field, but conversion was made to GMT (Ship's time + 9) on the field edit sheet and final discrepancy sheet. Notes on the field edit sheet and discrepancy print were made using colors with the following acceptable meanings: green-deletion of features; red-answers to specific questions on the sheets; violet-verification or additions.

The features were verified on foot. Additions of rocks were photo-pricked and referenced on the discrepancy print.

The black and white photos 642, 643, 644, 047, 048, the field edit sheet, and discrepancy print TP 00489 were used to record and present data.

This field edit survey complied with Chapter 11, Manual of Coastal Mapping Field Procedures and project instructions.

### Adequacy and Completeness

The manuscript, as amended by the field edit survey, is adequate and complete. The entire sheet is field edited.

### Geographic Names

There was no investigation of geographic names.

### Manuscript Accuracy

Direct comparison of shoreline features with the discrepancy print and photos was the method of determining accuracy. Agreement was excellent.

STACK (N19° 05' 37", W155° 33' 05") was found to be torn down.

### Recommendations

It is recommended that the Stack at N19° 05' 37.44", W155° 33' 05.31" be deleted. Further, the building at that location is being torn down, so it should be deleted from the charts.

This corrected manuscript should supercede all previous shoreline compilations.

Respectfully submitted,

*Thomas G. Clark*  
Thomas G. Clark  
Lieutenant, NOAA

Approved and Forwarded

*Wayne L. Mobley*  
Wayne L. Mobley  
Captain, NOAA  
Commanding

REVIEW REPORT  
TP-00489

SHORELINE

61 - GENERAL STATEMENT

Final review for this final field edited map was accomplished at the Atlantic Marine Center in February 1986. For a schedule of the office and field operations, refer to the Summary included with this Descriptive Report.

62 - COMPARISON WITH REGISTERED TOPOGRAPHIC SURVEYS

Not applicable.

63 - COMPARISON WITH MAPS OF OTHER AGENCIES

A comparison was made with the following USGS quadrangle:  
NAALEHU, Hawaii, dated 1962, 1:24,000 scale.

64 - COMPARISON WITH CONTEMPORARY HYDROGRAPHIC SURVEYS

A comparison was made with a registered copy of H-9857, RA-20-4-79, 1:20,000 scale (1:5,000 scale inset), field surveyed Oct.-Dec. 1979. This hydrographic survey includes a 1:5,000 scale inset of Honuapo Bay which corresponds to this final 1:5,000 scale shoreline map. Field edit, accomplished by the hydrographer, required several alongshore rocks to be applied on the shoreline map in an approximate position. Consequently, the position approximate (PA) rock notation was transferred to the hydro survey. These rocks were retained during final review.

65 - COMPARISON WITH NAUTICAL CHARTS

A comparison was made with the following NOS charts:  
19320, 1:250,000 scale, 13th edition, July 10, 1982  
19322, 1:2,500 scale, 6th edition, June 25, 1983.

The current charts reflect most of the detail that is portrayed on the hydrographic survey (H-9857) and the final shoreline map.

66 - ADEQUACY OF RESULTS AND FUTURE SURVEYS

This map complies with the Project Instructions, and meets the requirements for National Standards of Map Accuracy.

TP-00489

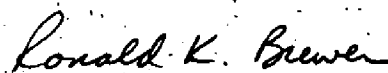
Submitted by:

Jerry L. Hancock  
Final Reviewer

Approved for forwarding:

Billy H. Barnes  
Chief, Photogrammetric Section, AMC

Approved:

John H. Muenz  
Chief, Photogrammetric Section,  
RockvilleRonald K. Brewer  
Chief, Photogrammetry Branch,  
Rockville





RESPONSIBLE PERSONNEL	
TYPE OF ACTION	NAME
OBJECTS INSPECTED FROM SEAWARD	T. Clark, Lt., NOAA ✓
POSITIONS DETERMINED AND/OR VERIFIED	T. Clark, Lt., NOAA ✓
FORMS ORIGINATED BY QUALITY CONTROL AND REVIEW GROUP AND FINAL REVIEW ACTIVITIES	R. Kravitz ✓
INSTRUCTIONS FOR ENTRIES UNDER 'METHOD AND DATE OF LOCATION'	
(Consult Photogrammetric Instructions No. 64.)	
<b>OFFICE</b> <b>I. OFFICE IDENTIFIED AND LOCATED OBJECTS</b> Enter the number and date (including month, day, and year) of the photograph used to identify and locate the object. EXAMPLE: 75E(C)6042 8-12-75	<b>FIELD (Cont'd)</b> <b>B. Photogrammetric field positions** require entry of method of location or verification, date of field work and number of the photograph used to locate or identify the object.</b> EXAMPLE: P-8-V 8-12-75 74L(C)2982
<b>FIELD</b> <b>I. NEW POSITION DETERMINED OR VERIFIED</b> Enter the applicable data by symbols as follows: F - Field L - Located V - Verified 1 - Triangulation 2 - Traverse 3 - Intersection 4 - Resection P - Photogrammetric Vis - Visually 5 - Field identified 6 - Theodolite 7 - Planetable 8 - Sextant A. Field positions* require entry of method of location and date of field work. EXAMPLE: F-2-6-L 8-12-75	<b>III. POSITION VERIFIED VISUALLY ON PHOTOGRAPH</b> Enter 'V-Vis.' and date. EXAMPLE: V-Vis. 8-12-75 <b>**PHOTOGRAMMETRIC FIELD POSITIONS are dependent entirely, or in part, upon control established by photogrammetric methods.</b>
*FIELD POSITIONS are determined by field observations based entirely upon ground survey methods.	

